Remarks

The present response is being submitted in reply to the Office action issued on April 10, 2007. Claims 1-19, 21-23 and 25-28 are pending in this application. Claims 8-13 have been withdrawn from consideration and claims 1-7, 12-19, 21-23 and 25-28 are under consideration for their merits. By the present response, claims 1-7, 14-19 and 28 have been amended. Claims 29-32 have been added. It is submitted that the claims have not been substantively amended, but rather have been amended to correct various informalities and to clarify the presently claimed invention. Moreover, the claims have been amended to correspond with those in the corresponding European patent application, such amendments being supported by the specification as discussed below. Claim 31 is a product-by-process claim comprising claim 1 and claim 19. Claim 32 is a "use" claim based on claim 25. No new matter has been added. Reconsideration is respectfully requested in light of the amendments being made hereby and of the following remarks.

Oath/Declaration

The Examiner states that the Applicant has not complied with the requirements of 37 CFR 1.63(c) since the declaration does not acknowledge the filing of any foreign application. It is submitted, as explained via telephone conference with the Examiner on June 22, 2007 with the undersigned's associate Sean Mellino, that the declaration was submitted on March 17, 2005 via facsimile and that a transmission error may have caused the relevant portion of the declaration to be inadvertently omitted. A copy of the declaration as originally filed is enclosed herewith. Withdrawal of this objection is respectfully requested.

Objection to the Information Disclosure Statement

The Examiner has noted that two references set forth in the Information Disclosure Statement lack certain information, such as place of publication, book title, and/or date of publication. In addition, the Examiner notes that some pages of some of listed non-patent references are missing. It is submitted that the applicable information and pages are still being obtained and will be provided to the Examiner as soon as such information is available.

Objection to the Specification

The specification has been objected to as failing to provide proper antecedent basis for the claimed subject matter. The Examiner requests correction of the following: "self-fluorescent" (claim 2), "concentration of the luminescent substance being 1 to 10%-wt" (claim 5) and "functional groups that can be coupled to streptavidin" (claims 18 and 28). The Examiner also notes a few instances where trademarked terms are used in the specification, but not set forth in capital letters or accompanied by the generic terminology.

Claim 2 has been amended, as set forth above, to recite "non auto-fluorescent." Support for this term may be found throughout the specification, such as in paragraph [000040].

Regarding claim 5, it is respectfully submitted the limitation therein is supported by the specification. In particular, the Applicant refers to paragraph [000057].

Regarding claims 18 and 28, paragraph [000067] of the specification has been amended, as set forth above.

Additionally, the specification has been amended, as set forth above, to capitalize instances of trademarked terms and to insert generic terminology, where necessary.

Withdrawal of the objections to the specification is respectfully requested.

Rejection of claim 2 under 35 U.S.C. 112, second paragraph

Claim 2 has been rejected under 35 U.S.C. 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. In particular, the Examiner states that in claim 2 the term "self-fluorescent" is vague and indefinite since the specification fails to define the term.

It is submitted that claim 2 has been amended accordingly, as noted above, the meaning of which would be clear to one skilled in the art. Withdrawal of this objection is respectfully requested.

Rejection of Claims 1-7 and 25 under 35 U.S.C. 102(b)

Claims 1-6 and 25 have been rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Publication No. US 2001/0029049 (Walt, et al.). The Examiner argues in the Office action that the Walt, et al. reference anticipates the instant claims by teaching luminescent silica gel particles (entire document) containing a transparent silica gel matrix (page 7, paragraph [0077]), the transparent silica gel matrix having at least one luminescent substance (page 9, paragraph [0085]), the size of the particle being at least 0.5 μm (page 9, paragraph [0089]). The Examiner further states that with respect to claims 2 and 4, Walt, et al. teach a luminescent silica gel particles wherein the luminescent substance includes fluorescein (page 8, paragraph [0081]) which would not be self-fluorescent. With respect to claim 3, the Examiner states that Walt, et al. teach

that the luminescent substance is encapsulated in the particles (page 9, paragraph [0085]). With respect to claim 6, the Examiner states that Walt, et al. teach that any two of the luminescent substances display different emission frequencies (page 8, paragraph [0082]).

With respect to claim 5, the Examiner states that it has long been settled to be no more than routine experimentation for one of ordinary skill in the art to discover an optimum value for a result effective variable. Moreover, the Examiner argues that the specification does not disclose that the specifically claimed range(s) of "1 to 10%-wt concentration of the luminescent substance" is for any particular purpose to so solve any stated problem that distinguishes it from the other ranges disclosed and that the specification lacks disclosure of the criticality required for providing patentability to the claimed range(s). The Examiner concludes that since Walt, et al. teach that varying concentrations of luminescent substance can be used to produce luminescent silica gel particles (page 4, paragraph [0046]), the prior art therefore provides teaching that the concentration of luminescent substance is a variable that achieves a recognized result and satisfies the requirement of a result-effective variable in order to set forth an obviousness rejection based on optimization.

Regarding claim 25, the Examiner argues that Walt, et al. teach a sensor array (Abstract) and that the limitation of "for at least one of the analysis of diagnostic testing of nucleic acids, nucleic acid fragments, proteins, peptides, antibodies, antibody fragments, cells, cell receptors and biotinylated biomolecules and testing protein or nucleic acid libraries" is an intended use of the claimed invention and must result in a

structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. The Examiner further argues in this regard that since the sensor array of Walt, et al. meets all the structural limitations of the claimed invention, the sensor array of Walt, et al. is capable of performing the intended use.

Claim 7 has been rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Publication No. US 2001/0029049 (Walt, et al.) in light of U.S. Patent No. 4,235,869 (Schwarzberg). The Examiner argues in the Office action that Walt, et al. teaches luminescent silica gel particles for use in an optical chemical array sensor system, as set forth above, and further teach that the luminescent substance include fluoresceins (page 8, paragraph [0081]). However, the Examiner acknowledges that Walt, et al. fail to teach that fluorescein has an excitation frequency higher than the emission frequency.

The Examiner states that Schwarzberg teaches that fluorescein has an excitation wavelength of 520 nm (column 20, lines 45-57). Therefore, the Examiner concludes that one of ordinary skill in the art at the time of the invention would recognize that the luminescent substances (fluoresceins) of Walt, et al. inherently have an excitation frequency higher than the emission frequency.

The Applicant now respectfully refers to MPEP §706.02(b), which provides that a rejection based on 35 U.S.C. 102(b) can be overcome by:

(a) Persuasively arguing that the claims are patentably distinguishable from the prior art;

(b) Amending the claims to patentably distinguish over the prior art; or

(c) Perfecting priority under 35 U.S.C. 119(e) or 120 by amending the specification of the application to contain a specific reference to a prior application or by filing an application data sheet which contains a specific reference to a prior application in accordance with 37 CFR 1.78(a).

The Applicant first provides a brief summary of the presently claimed invention for ease of discussion. In particular, the present invention refers to luminescent silica gel particles and a process for preparing luminescent silica gel particles. The luminescent silica gel particles exhibit a transparent silica gel matrix containing at least one luminescent compound whereas the particles comprise a particular size, luminescent compound, magnetic colloid and functional groups in the silica gel matrix. The particle size is between 0.5 to 50 μm (paragraph [000052]). The luminescent compound according to the present invention are luminescent markers (as amended above) (paragraph [000054], nanocrystals (paragraph [000054]), semiconductors from the group IV/A (paragraph [000054]), up-converting phosphors (paragraph [000055]) and luminescent proteins ([paragraph 000056]). The magnetic colloids are discussed, for example, at paragraph [000060]. The equipment of the silica gel matrix with functional groups which can be coupled with biomolecules is disclosed at paragraph [000067].

The Applicant respectfully submits that the present invention is patentably distinct from the invention disclosed in this reference. Specifically, each and every feature of the present invention as recited in claims 1-6 and 25 are not taught or disclosed in Walt, et al., and therefore the reference does not anticipate the present invention. Moreover, it

would not be obvious to one skilled in the art to have amended the invention as set forth in Walt, et al. to incorporate the features of the present invention as set forth in the presently rejected claims.

The subject of Walt, et al. is a microsphere-based analytic chemistry system in which self-encoding microspheres having distinct characteristic optical response signatures are used. Paragraph [0077] of Walt, et al., cited by the Examiner, discloses that the silica beads are adapted with a variety of bonded phases for use in phenomenex (i.e., chromatography), columns. At line 21 of paragraph [0077] (page 8), the reference states that porous silica beads are disclosed which will be treated with silanization. However, the Applicant respectfully disagrees with the Examiner's position on the teaching of Walt, et al. and submits that the reference discloses different silica particles which are not transparent.

Moreover, the Examiner also argues in the Office action that at paragraph [0081], Walt, et al. disclose a fiber optic sensor array system in which fluorescein as a chemical dye indicator is incorporated. In contrast thereto, the present invention comprises the luminescence particles – such as fluorescein – are incorporated in the silica gel matrix.

In addition, the size of the beads of Walt, et al. is disclosed in a wide range, including 100 nm to 1 mm, 0.2 micron to about 200 microns being preferred, and 0.5 to about 5 micron being particularly preferred – or even smaller beads. However, in contrast thereto, the particle size according to the presently claimed invention is a significant election characteristic for the silica gel particles of the present invention. It is respectfully

submitted that in order to anticipate the claims, the claimed subject matter must be disclosed in the reference with "sufficient specificity to constitute an anticipation under the statute." What constitutes a "sufficient specificity" is fact dependent. If the claims are directed to a narrow range, >and< the reference teaches a broad range, depending on the other facts of the case, it may be reasonable to conclude that the narrow range is not disclosed with "sufficient specificity" to constitute an anticipation of the claims. (M.P.E.P. Section 2131.03(II), citing *Atofina v. Great Lakes Chem. Corp.*, 441 F.3d 991, 999, 78 USPQ2d 1417, 1423 (Fed. Cir. 2006), wherein the court held that a reference temperature range of 100-500 degrees C did not describe the claimed range of 330-450 degrees C with sufficient specificity to be anticipatory. Therefore, it is respectfully submitted that the cited prior art fails to anticipate the present claims.

Still further, the Applicant respectfully disagrees, with reference to paragraph [0085] of Walt, et al., with the assertion that the dyes of Walt, et al. are covalently bonded with the beads. In contrast thereto, the luminescent compounds of the invention are encapsulated in the transparent matrix of the silica gel.

Regarding the Examiner's position on claim 6, it is respectfully submitted that it has been disregarded that present claim 6 should be read in view of the primary claim and that every chemical compound has different emission frequencies. In other words, it is submitted that each of the dependent claims carry the limitations of the respective parent claim, and therefore they should be allowed in connection with the allowance of the respective parent claim.

Regarding the Examiner's position on claim 5, it is submitted that claim 5 recites that the concentration of the luminescent compound in the particles of the invention is in the range of 1% to 10% per rate. Such a range teaches those skilled in the art that the preferred optimum is higher than 1% and lower than 10%. It is submitted that such a range cannot be found by pure routine experimentation as this range is a preferred teaching for all particles. It is respectfully submitted that routine experimentation is only possible for single species. Moreover, paragraph [000057] of the specification provides that "[c]oncentrations of 1-10% by weight of the marker substance are usually adequate to achieve a clear luminescence" which supports the criticality of this range.

In summary, it is submitted that Walt, et al. fails to teach or disclose transparent luminescent silica gel particles, fluorescein encapsulated in the silica gel matrix and the significance of the selection of the particle size in accordance with the presently claimed invention.

Therefore, because each and every feature of the present invention as recited in claims 1-6 and 25 are not taught or disclosed in Walt, et al., the Applicant submits that the reference does not anticipate the present invention. It is respectfully requested that this rejection be withdrawn.

Regarding the anticipation rejection of claim 7, the Applicant respectfully disagrees for at least the deficiencies of Walt, et al. discussed above. It is further submitted that Schwarzberg discloses a method for performing a protein-binding array. The method for preparing the protein-binding array involves employing a monovalent

receptor to which a label (e.g., fluorescein) is conjugated and combining the monovalent receptor labeled to the ligand. The Examiner argues that support for this position may be found at the introduction of the experimental part of Schwarzberg (i.e., column 20, lines 45-56). In connection with the experiments in this portion of Schwarzberg, the different wavelengths for excitation and immission of fluorescein are disclosed. In addition, different wavelengths for excitation and immission are the significant properties for all fluorescent compounds.

The Examiner presents this rejection as an anticipation rejection; however, it appears that reliance on the secondary reference indicates that it should be based on obviousness. Nevertheless, it is submitted by the Applicant that Schwarzberg fails to make up for any of the deficiencies of Walt, et al. Regarding present claim 7, it is submitted that the claim discloses that the present invention at least one of the fluorescent compounds should belong to the group wherein the excitation frequency is higher than the immission frequency, and that such a compound would be fluorescein. In particular, claim 7 is a preferred limitation for selecting the luminescent compound in the particles of the present invention.

Therefore, because each and every feature of the present invention as recited in claim 7 is not taught or disclosed in Walt, et al. in light of Schwarzberg, the Applicant submits that the reference does not anticipate the present invention, nor do the aforementioned references make the present invention as set forth in claim 7 obvious. It is respectfully requested that this also rejection be withdrawn.

Rejection of Claims 14-19, 21-23 and 26-28 under 35 U.S.C. 103(a)

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walt, et al. in view of Chen, et al. (*Chem. Mater.*, 1995, Vol. 7, pp. 1779-1783). The Examiner argues in the Office action (page 10) that Walt, et al. teaches luminescent silica gel particles for use in an optical chemical array sensor system (as discussed above). The Examiner states that Walt, et al. further teaches that a variety of fluorescent dyes can be employed to optically encode silica gel particles (page 8, paragraphs [0081] and [0082]). However, the Examiner acknowledges that Walt, et al. fail to teach luminescent silica gel particles, wherein the luminescent substance is a luminescent protein. The Examiner refers to Chen, et al. for the teaching of a method of making optically transparent biomaterial using sol-gel encapsulation method, in which fluorescent proteins such as phycobiliproteins are added to a silica sol (entire document, i.e., page 1780, Methods). The Examiner therefore concludes that it would have been obvious to one of ordinary skill in the art to employ the sol-gel encapsulation method of Chen, et al., in which fluorescent proteins, such as phycobiliproteins, are added to a silica gel to produce optically encoded silica particles The Examiner further argues that the advantage of optically encoding silica particles which exhibit characteristic, i.e., unique, optical signature to a reference analyte, provides the motivation to combine teachings of Walt, et al. and Chen, et al. with a reasonable expectation of success as optically encoded silica particles (luminescent silica particles) with unique, optical signature can be conveniently decoded for identification of reference analyte for use in biochemical assays. Further, the Examiner argues that it would have been obvious to select a fluorescent (luminescent)

protein as a fluorescent dye, since it has been held to be within the general skill of worker in the art to select a known material on the basis of suitability for the intended use as a matter of design choice. Thus, the Examiner concludes that it would have been obvious to employ fluorescent proteins as the fluorescent dyes in the instant claim.

Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walt, et al. in view of WO 02/09125 (Mueller-Schulte). The Examiner argues that Walt, et al. teaches luminescent silica gel particles for use in an optical chemical array sensor system (as discussed above) and that the particles (beads) encoded with one or more report dyes exhibit characteristic, i.e., unique, optical signature to a reference analyte (page 4, paragraph [0050]). As a result, the individual sensor elements of the array are conveniently decoded simultaneously in one simple measurement (page 4, paragraph [0050]). However, the Examiner acknowledges that Walt, et al. fail to teach luminescent silica gel particles further comprising a magnetic colloid.

The Examiner refers to Mueller-Schulte for the teaching for producing magnetic SiO_2 particles comprising the steps of a) alkoxysilanes are dispersed in water, acid-catalytically hydrolyzed and condensed to form an SiO_2 hydrosol; b) a magnetic particle-sol mixture is produced by adding magnetic particles, for example, usual magnetic particles, magnetic colloids and/or ferrofluids to the SiO_2 hydrosol; c) dispensing the magnetic particle-sol mixture in an organic solvent which is immiscible with water; and d) adding a base to the magnetic particle-sol mixture during or after the dispersion in the organic solvent in order to form a gel (Abstract). The magnetic SiO_2 particles of Muller-Schulte can be used in a variety of biochemical applications, including magnetic

separation assays (page 17 of machine translated document).

With respect to claim 17, the Examiner states that Muller-Schulte teaches that magnetic colloid is present in a concentration of 10-50% by weight relative to the polymer particle (claim 69).

Therefore, the Examiner concludes that it would have been obvious to employ the SiO_2 particle of Muller-Schulte in the optical chemical array sensory system of Walt, et al. to use the optically encoded luminescent silica gel particles in a variety of biochemical applications including magnetic separation assays.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walt, et al. in view of Mueller-Schulte as applied to claim 15 and further in light of U.S. Patent No. 6,270,965 (Kleiber, et al.). The Examiner argues in this instance that Walt, et al. in view of Muller-Schulte teach luminescent silica gel particles for use in an optical chemical array sensor system (as discussed above) and that Walt, et al. further teaches that a variety of functional groups, such as aldehydes (page 12, Table 1 and paragraph [0108]) can be attached to the particles for adding bioactive agents. However, the Examiner acknowledges that Walt, et al. in view of Muller-Schulte fail to teach luminescent silica gel particles wherein the silica gels have functional groups that can be coupled to streptavidin.

The Examiner refers to Kleiber, et al. for the teaching that aldehyde groups covalently couple with streptavidin (entire document, namely, colum 3, lines 31-36).

Therefore, the Examiner concludes that it would have been obvious to one of ordinary skill in the art that aldehyde group on the luminescent silica gel particles of

Walt, et al. in view of Muller-Schulte would be capable of coupling to streptavidin.

Claims 19, 21-23, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mueller-Schulte in view of Chen, et al. and Walt, et al. The Examiner argues that Muller-Schulte teaches a method for producing magnetic SiO_2 particles comprising the steps of a) alkoxysilanes are dispersed in water, acid-catalytically hydrolyzed and condensed to form an SiO_2 hydrosol; b) a magnetic particle-sol mixture is produced by adding magnetic particles, for example, usual magnetic particles, magnetic colloids and/or ferrofluids to the SiO_2 hydrosol; c) dispensing the magnetic particle-sol mixture in an organic solvent which is immiscible with water; and d) adding a base to the magnetic particle-sol mixture during or after the dispersion in the organic solvent in order to form a gel (Abstract). The magnetic SiO_2 particles of Muller-Schulte can be used in a variety of biochemical applications, including magnetic separation assays (page 17 of machine translated document).

For claim 21, the Examiner states that Muller-Schulte teaches a method, wherein the organic phase contains at least one surfactive substance in a concentration of 0.1 to 15% by volume (claims 40 and 43 of the translated document).

For claim 22, the Examiner states that Muller-Schulte teaches a method, wherein the volume ratio of sol to organic phase is 1:5 to 1:30 (claim 45 of the translated document).

For claim 23, the Examiner states that Muller-Schulte teaches a method, wherein the dispersing and cross-linking steps have a duration of 2 to 5 seconds (claim 9 of the translated document).

For claim 26, the Examiner states that Muller-Schulte teaches a method, wherein the ferro-magnetic substances added to the sol substance in an amount of 10-50% by weight (claim 37 of the translated document).

For claim 27, the Examiner states that Muller-Schulte teaches a method, further including a step of mixing an aqueous solution of organic polymer, a polysaccharide or a protein in an amount of 1-20% by volume with the sol before the dispersing step (claims 61 and 64 of the translated document).

However, the Examiner acknowledges that Muller-Schulte fails to teach a method wherein at least one luminescent substance is mixed with clear silica gel. The Examiner refers to Chen, et al. for the teaching of a method of making optically transparent biomaterial using sol-gel encapsulation method in which fluorescent proteins such as phycobiliproteins are added to a silica gel (entire document, namely, page 1780, Methods). Moreover, the Examiner refers to Walt, et al. for the teaching that particles (beads) encoded with one or more reporter dyes exhibit characteristic (i.e., unique) optical signature to a reference analyte (entire document, namely, page 4, paragraph [0050]) and as a result the individual sensor elements of the array are conveniently decoded simultaneously in one simple measurement (page 4, paragraph [0050]).

Therefore, the Examiner concludes that it would have been obvious to one of ordinary skill in the art to include a step of mixing at least one luminescent substance with the clear silica sol of Muller-Schulte as taught by Chen, et al. in order to produce optically encoded silica particles.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walt, et

al. in view of Muller-Schulte as applied to claim 15 and further in view of U.S. Patent No. 5,527,711 (Tom-Moy). The Examiner argues in the Office action that Walt, et al. in view of Muller-Schulte teach luminescent silica gel particles for use in an optical chemical array sensor system (as discussed above), but that Walt, et al. in view of Muller-Schulte fail to teach luminescent silica gel particles wherein the silica gels have functional groups that can be coupled to streptavidin.

The Examiner refers to Tom-Moy for the teaching that avidin/streptavidin (column 4, lines 62-63) can be coupled to silica substrate, a biotinylated antibody can be attached to the avidin/streptavidin, and biotin can be added to block unoccupied active sites (entire document, namely, column 2, lines 20-37) and that this composite surface will bind tightly to antigen with minimal nonspecific absorption (column 2, lines 35-37). The Examiner therefore concludes that it would have been obvious to one of ordinary skill in the art to coat the surface of the luminescent silica gel particles of Walt, et al. in view of Muller-Schulte with streptavidin as taught by Tom-Moy in order to attach biotinylated antibody, which can bind tightly to an antigen of interest with minimal non-specific absorption.

The Applicant respectfully submits that to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Third, the prior art reference (or references when combined) must teach or suggest all of the claim limitation. Applicant respectfully submits that one skilled in the art would have no suggestion or motivation to combine the

aforementioned references in order to arrive at the presently claimed invention. Additionally, even if one skilled in the art were to consider any of the aforementioned combinations of references, each and every limitation of the present invention would not be disclosed, nor would there be a reasonable expectation of success if the aforementioned references were to be considered. Still further, a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention (M.P.E.P. 2141.02 VI; *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)).

The Applicant again disagrees with the Examiner's rejection for at least the numerous deficiencies of Walt, et al., which have been discussed at length above. The teachings of Chen, et al. fail to make up for any of the many deficiencies of Walt, et al. In particular, the subject matter of Chen, et al. refers to an optically transparent biomaterial product by encapsulating a light transparent protein in a silica-sol-gel matrix (page 1780, left column, second paragraph). In contrast to the particles of the present invention which are luminescent silica gel particles, the material of Chen, et al. is a sol-gel-glass (page 1783 & summary) in which the biomaterial is encapsulated. In further contrast to the particles of the present invention, the silica-gel matrix is equipped with functional groups which are coupled with the biomolecules. As a glass according to Chen, et al., one skilled in the art would not have referred to the teaching therein for making the presently claimed invention obvious. Withdrawal thereof is respectfully requested.

Muller-Schulte also fails to make up for any of the deficiencies of Walt, et al., which are discussed above. For example, Muller-Schulte teaches a method for producing SiO_2 particles which are mixed with a magnetic colloid (page 11, line 20). In an embodiment of the present invention, the luminescent silica-gel particles are mixed with a known magnetic colloid. The result of this combination is a new medical preparation with enhanced properties. It is submitted that the combination of claim 18 opens new forms of highly efficient bio-arrays (page 11, line 4). Withdrawal thereof is respectfully requested.

Regarding claim 18, the Applicant respectfully disagrees with the Examiner's position for at least the deficiencies of Walt, et al. and Muller-Schulte, discussed above. Moreover, it is submitted that Kleiber, et al. fail to make-up for any of these deficiencies. In light of this, the combination of prior art fails to disclose every limitation of the present invention. Withdrawal of this rejection is respectfully requested.

The Applicant also disagrees with the Examiner's rejection of the present process claims in view of the cited prior art, in particular for at least the deficiencies of Muller-Schulte, Walt, et al. and Chen, et al. discussed above. Moreover, none of Muller-Schulte, Walt, et al. and Chen, et al. teach the inverse suspension method of the present invention, i.e., a mixture consisting of silica-gel sol and a luminescent compound being dispersed in an organic phase that is miscible in water and then polycondensed (specification, paragraph [000042]). This particular process allow for the preparation of the luminescent particles of the present invention. It is submitted that the cited prior art fails to teach or disclose the inverse suspension method of the present process claims. Therefore, the

cited prior art fails to teach every limitation of the process claims and cannot be the basis of an obviousness rejection. Moreover, Tom-Moy fails to make up for the deficiencies of the prior art. Withdrawal of these rejections is respectfully requested.

In light of the aforementioned deficiencies of the combination of the teachings of cited prior art, the Applicant respectfully submits that the combination of references fails to teach every limitation set forth in the presently rejected claims and that due to these deficiencies, one skilled in the art would not have been motivated to combine these references to arrive at the present invention. Withdrawal of this rejection is strongly requested.

Conclusion

In light of the foregoing claims and arguments, it is believed that the present application is in condition for allowance, and such action is earnestly solicited. The Examiner is invited to call the undersigned if there are any remaining issues to be discussed which could expedite the prosecution of the present application.

Respectfully submitted,

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